

Notice of Allowability

Application No.

09/643,686

Examiner

Kartic Padmanabhan

Applicant(s)

QUAPIL ET AL.

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/7/05.
2. ☒ The allowed claim(s) is/are 2-19,27 and 28.
3. ☒ The drawings filed on 24 August 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 3/7/05
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/27/05 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Wiseman on 3/7/05.

The application has been amended as follows:

- 1) In claim 16, line 1, change "transmitter is" to --transmitters are--.
- 2) Claim 22 is cancelled.
- 3) Claims 24-26 are cancelled without prejudice to the filing of divisional application(s).
- 4) Replace Claims 27 and 28 with the following:

Claim 27 (Currently Amended): A device for analyzing sandwich immunoassays with a liquid assay medium, comprising:

a plurality of vessels for holding the assay medium, each of the vessels having a base comprised of a solid body, the solid body having a first side wall and a top surface constituting a bottom surface of the vessel and forming a boundary surface of the solid body, wherein first reaction agents are dissolved in the assay medium in the vessel and are labeled with a luminophore or different luminophores and second reaction agents are bonded to the boundary surface within a boundary layer of the assay medium;

a plurality of transmitters for emitting light rays that are coupled into the base of ~~the~~ each vessel via the first side wall and conducted at a total reflection angle to the boundary surface so that luminophore-labeled first reaction agents that are bonded to the second reaction agents are optically excited by at least some of the light rays and emit at least one of fluorescent and phosphorescent rays;

a polygonal mirror; and

a receiver positioned for quantitatively detecting the at least one of the fluorescent rays and phosphorescent rays,

wherein the plurality of transmitters are activated individually, one after another, and the plurality of vessels are arranged concentrically to the polygonal mirror so that the fluorescent rays exiting at the vessels are conducted via the polygonal mirror to the receiver, and the receiver is a common receiver for recording the fluorescent rays exiting from the individual vessels.

Claim 28 (Currently amended): A device for analyzing immunoassays with a liquid assay medium, comprising:

a plurality of vessels, each vessel having a well with a lower portion for holding the assay medium and having a base which has a top layer that defines the lower portion of the well and a first side wall, which is capable of receiving light rays and reflecting them to the top layer where a second reaction component is bound;

a plurality of transmitters, each transmitter for emitting light rays to the base of ~~the~~ each vessel via the first side wall and conducted at a total reflection

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angle to a boundary surface formed between the bound second reaction component and the assay medium so that luminophore-labeled first reaction agents that are bonded to the second reaction agents are optically excited by at least some of the light rays and emit at least one of fluorescent and phosphorescent rays;

a receiver positioned underneath the base to receive at least one of the emitted fluorescent rays and phosphorescent rays and thereby permit a direct quantitative measurement of an analyte of interest;

a polygonal mirror; and

~~an~~ a plurality of optical swamps positioned to receive the reflected light rays, wherein the assay medium contains first reaction agents which are labeled with a luminophore or different luminophores and sample suspected of containing an analyte of interest

wherein the plurality of transmitters are activated individually, one after another, and the plurality of vessels are arranged concentrically to the polygonal mirror so that the fluorescent rays exiting at the vessels are conducted via the polygonal mirror to the receiver, and the receiver is a common receiver for recording the fluorescent rays exiting from the individual vessels and the plurality of optical swamps are arranged so that the light rays transmitted into the base via the first side wall are conducted to the optical swamp after the light rays exit from the vessel.

Allowable Subject Matter

3. In view of applicant's amendment and the Examiners Amendment above, claims 2-19, 27, and 28 are allowed.
4. The following is an examiner's statement of reasons for allowance: the closest prior art of record fails to disclose or teach a device comprising all the limitations of the presently recited claims.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Claims 2-19, 27, and 28 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 571-272-0825. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kartic Padmanabhan
Patent Examiner
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3/12/05